

Achieve consistently high product quality

- ▶ Run the plant at capacity
- ▶ Consistent high product quality
- ▶ Make informed, timely and correct decisions
- ▶ Preventative maintenance
- ▶ Define maintenance cycles
- ▶ Linked to the general ledger

Keep the plant running at capacity and achieve consistently high product quality, fundamental for a good business.

The Plant and the equipment used is vital to any manufacturing business. Maintenance of the Plant itself is a crucial factor in the manufacturing process and Answer Plant Maintenance has been designed with this in mind.

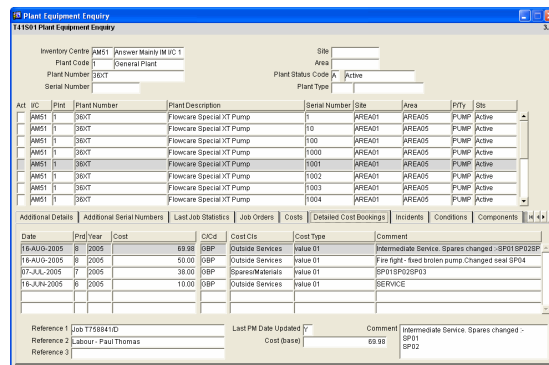
This application is one of the key modules in your CMMS (Computerised Maintenance Management System) or EAM (Enterprise Asset Management) strategy.

Plant Maintenance has powerful facilities to aid Maintenance Personnel in their day-to-day activity as well as planning what should be done in the future and resolving any issues that have happened in the past. Management have immediate and total access to all of the Maintenance Availability and Planned Usage details necessary to make informed, timely and correct decisions.

Employ a program of Preventative Maintenance (PM) Activities to be implemented in order to keep Plant Utilisation as efficient as possible. PM Jobs are automatically triggered based on a number of frequency and/or statistical and date based options.

Define maintenance cycles to meet the most demanding items of plant. Book and allocate costs to a piece of plant on Job Order by Job Order basis. These costs are then automatically processed into the Answer General Ledger.

Answer Plant Maintenance will also manage Serial Tracked items of Plant that are stored, loaned and/or serviced at external locations.



The screenshot shows the 'Plant Equipment Enquiry' window. At the top, there are search filters for Inventory Centre (AM51), Answer Mainly IM UC 1, Site, Plant Code (General Plant), Plant Number (SBC1), Plant Status Code (Active), and Plant Type. Below this is a table listing equipment items:

Act	IC	Plant Number	Plant Description	Serial Number	Site	Area	PLTY	Sts
AM51	SBC1		Floware Special XT Pump	1	AREA01	AREA05	FLMP	Active
AM51	SBC1		Floware Special XT Pump	10	AREA01	AREA05	FLMP	Active
AM51	SBC1		Floware Special XT Pump	100	AREA01	AREA05	FLMP	Active
AM51	SBC1		Floware Special XT Pump	1000	AREA01	AREA05	FLMP	Active
AM51	SBC1		Floware Special XT Pump	1001	AREA01	AREA05	FLMP	Active
AM51	SBC1		Floware Special XT Pump	1002	AREA01	AREA05	FLMP	Active
AM51	SBC1		Floware Special XT Pump	1003	AREA01	AREA05	FLMP	Active
AM51	SBC1		Floware Special XT Pump	1004	AREA01	AREA05	FLMP	Active

Below the equipment table is a 'Cost History' table with columns for Date, Prol Year, Cost, COC, Cost Cts, Cost Type, and Comment:

Date	Prol Year	Cost	COC	Cost Cts	Cost Type	Comment
16-AUG-2005	8	69.98	GBP	Outside Services	value 01	Intermediate Service. Spares changed - SP01 SP02SP
16-AUG-2005	8	50.00	GBP	Outside Services	value 01	Fire fight - feed broken pump. Changed seal SP04
07-JUL-2005	7	38.00	GBP	Spares/Materials	value 01	SP01 SP02 SP03
16-JUN-2005	8	10.00	GBP	Outside Services	value 01	SERVICE

At the bottom, there are reference fields: Reference 1 (Job TT69410), Reference 2 (Labour - Paul Thomas), Reference 3, Last PM Date Updated (69.98), and Comment (Intermediate Service. Spares changed - SP01 SP02).

Answer provides five key components:

- ▶ Preventative Maintenance (PM)
- ▶ External Location Management
- ▶ Job Order Control provides the means to Plan, Schedule and Control Labour, Materials, Sub Contracts and more
- ▶ Plant Equipment History summaries the spend of Labour, Materials, Sub Contract etc and Downtime Costs associated with maintaining a given item of equipment or user defined groups of equipment
- ▶ Spare Part Inventory Control is also critical to your inventory reduction program

This module is also, optionally, fully integrated to:

- ▶ Purchase Management
- ▶ Financials, Fixed Assets, Accounts Payable and General Ledger
- ▶ Answer Manufacturing
- ▶ Inventory Management

Conditions

A generic facility to define High, Mean and Low values associated with a particular Condition.

Where Low and High Values have been specified, either a PM Job or a Standard Job can be associated with these values.

Each Condition can then be associated with one or more Items of Plant or an Item of Plant can have multiple Conditions associated with it.

Condition details can be entered and logged into the system with an option to convert these to Job Orders should further activity be required.

Incidents

An incident should be considered as something normally reported by personnel who may not necessarily work within the Plant Maintenance section of a company.

An Incident may be defined as important, or merely if reported to be reviewed. Where Incidents require further action, these can be converted into Job Orders for further activity to take place.

Plant Equipment Statistics

An unlimited number of different Units of Measure can be entered and details maintained. These may be Meter Tracked Units of Measure i.e. number of litres per hour flow, or can be based on Actual or Average Statistics. These Statistics then form one of the bases for the purpose of PM Planning.

These statistics may come from Answer Manufacturing via Resource Usage bookings or back flush resource processing.

As an integral component of Answer Enterprise, Plant Maintenance integrates with Inventory Management and Purchasing, General Ledger, Accounts Payable and the Planning modules to ensure Plant Maintenance works as one with the rest of your business.

Plant Organisation Management

- ▶ Group Plant Equipment details into Entities
- ▶ Group Entities and Plant Equipment details into Entities
- ▶ Create an Entity/Plant Equipment Structure for Costs Management
- ▶ Define Budgets at Entity or Plant Equipment Levels
- ▶ General Site Calendar
- ▶ Plant Equipment Specific Calendars

Plant Location Management

A Plant Equipment can have the concept of a 'Location' associated with it, this could be Vendor, Customer, Contact Centre Relationship and so on. If utilised then a formal Change and Tracking facility, with user defined rules, can be applied. This allows you to know where an item of Plant is at any point in time.

Plant Equipment Component Exchange

This allows Tracking of Components where they may be transferred in and out of individual Items of Plant. If a Motor is an Installed Component it can be Tracked and Traced completely.

Plant Equipment Definition Management

- ▶ Define Plant Equipment Items which can be of any type, Equipment, Machines, Safety Apparatus, Vehicles, whatever is required
- ▶ Track Plant Equipment Serial Numbers
- ▶ Auto generate additional Serial Numbers based on a master
- ▶ Define where Plant Equipment details are, with Site/Area definitions
- ▶ Define the Statistical Basis of Operation for Plant Equipment Items
- ▶ Define Frequency Classes for PM Jobs
- ▶ Create a relationship with primary PM Job, Frequency Class and Plant Equipment Item
- ▶ Optionally define Installer and Commissioning details
- ▶ Define Text/Comments and Other Resource details
- ▶ Define Additional details and utilise User Defined Specification sheets
- ▶ Optionally define De-Commissioning details
- ▶ Optionally define Health and Safety and Installed Component details
- ▶ Optionally define Labour Requirements and Outside Services Requirements
- ▶ Optionally define Manufacturer and Drawing details
- ▶ Optionally define Spares, Kits and Related Machine/Equipment details
- ▶ Optionally define Plant Statistics and Plant Supplier details
- ▶ Optionally define Further Plant details and Plant Cross References to Inventory, Fixed Assets, Quality Management or Rental and Hire Items
- ▶ Optionally define Permit requirements
- ▶ Optionally Assign Technical Documentation/Manuals
- ▶ Plant Equipment Same As Except
- ▶ Optionally define Plant Conditions and Activities to be performed if Conditions are reached or breached
- ▶ Define users who are authorised to create and approve orders
- ▶ Optional Location Tracking with user defined movement rules

Plant Job Order Management

- ▶ Maintenance Requisition Entry, Authorisation and Conversion to Job Order
- ▶ Job Order Creation From an Incident, Condition, Maintenance Requisition, Standard Job, History Job Order, Planned PM Job, Current Job Order
- ▶ Job Order Creation Copy of previous Actually Incurred Costs
- ▶ Manual Job Order Definition and Plant Equipment defaulting
- ▶ Manually define Extended details, Health and Safety, Engineering Requirements, Job Analysis Codes and/or Text/Comments
- ▶ Manually define an unlimited number of Job Order Tasks
- ▶ Tasks when defined can have Labour, Spares, Outside Service, Other Resource requirements
- ▶ Tasks can also have Text/Comments, Health and Safety and Permit Requirements
- ▶ Job Order Authorisation and/or Approvals
- ▶ Job Order Release, Spares Allocation, Job Order and Pick List Reports
- ▶ Optionally Job Order Schedule creation and Job Schedule Print
- ▶ Job Order Transaction Processing
- ▶ Job Order Multi Step Close, with failure reasons and comments
- ▶ Job Order Finalisation
- ▶ Job Order Close and Back Flush of Spares Usage where defined

Plant Job Order Transaction Processing Management

- ▶ Book Engineering details
- ▶ Issue Inventory Spares details
- ▶ Record Outside Services Costs
- ▶ Record Other Resource Costs and Usages
- ▶ Book Labour details
- ▶ Record Delays
- ▶ Return Spares if necessary
- ▶ Ability to link an Outside Service Task to a Sub Contract Purchase Order for Cost retrieval and updating

Plant Equipment Recording Management

- ▶ Plant Equipment Site/Area Transfer Control
- ▶ Component Exchange Tracking
- ▶ Calibration and Inspection Recording
- ▶ Down Time and Production/Manufacturing Statistics Recording
- ▶ Employee Time Recording
- ▶ Incident Logging
- ▶ Conditions Bookings
- ▶ Certification Recording
- ▶ Location movement and change recording

Standard Job Management

- ▶ Define Standard Jobs
- ▶ Define Standard Jobs Comments and Tasks to be carried out
- ▶ For each Task, define Labour, Spares, Outside Services and Other Resource requirements
- ▶ For each Task optionally define Text/Comments and Health and Safety details
- ▶ Associate Standard Job with multiple Plant Equipment details
- ▶ Alternatively associate a Plant Equipment details with multiple Standard Jobs
- ▶ Same As Except Standard Job

Preventative Planning Job Management

- ▶ Define Preventative Maintenance, PM, Job
- ▶ Define Frequency Class
- ▶ Define PM Job Text/Comments and Tasks to be Carried Out
- ▶ For each Task, define Labour, Spares, Outside Services and Other Resource requirements
- ▶ For each Task optionally define Text/Comments and Health and Safety requirements/details
- ▶ PM Job Same As Except
- ▶ Associate a PM Job with multiple Plant Equipment details
- ▶ Associate a Plant Equipment detail with multiple PM Jobs
- ▶ Define Plant/PM Job Frequency details to use Elapsed Days, Unit of Measure (Production Statistics), Date Based Occurring every 'n' times, use of Shutdown codes etc
- ▶ Download Plant Maintenance Statistics (usage figures) from Answer Manufacturing

Preventative Planning Forward Plan Generation

- ▶ Multiple Forward Plan Simulations
- ▶ Extensive Selection Criteria
- ▶ Optionally apply Time Grouping
- ▶ Optionally, Generate Spares Requirements
- ▶ Optionally, Generate Labour Requirements
- ▶ Planned PM Job to Job Order Conversion
- ▶ Planned PM Job to Contact Centre Activity generation
- ▶ Planned PM Job to create Customer Returns for Service Items
- ▶ Planned PM Job to both Job Order Conversion and Contact Centre Activity generations
- ▶ Optionally, Generate Other Resources Requirements
- ▶ Upload Plant Maintenance Statistics (usage figures) from Answer Manufacturing
- ▶ Reserve Production Capacity based on PM Job Schedule

For more information visit the Answer Solutions website or contact us.

Answer Solutions Ltd

The Innovation Centre
Festival Drive
Ebbw Vale
NP23 8XA

w: www.answersolutions.com
e: info@answersolutions.com
t: 01495 356771
f: 01495 356774